

इंटरनेट

मानक

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Mazdoor Kisan Shakti Sangathan

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“पुराने को छोड़ नये के तरफ”

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“Step Out From the Old to the New”

IS 8115 (1976): Double hessian jute bags for pesticides
[TXD 3: Jute and Jute Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
**SPECIFICATION FOR
DOUBLE HESSIAN JUTE BAGS FOR PESTICIDES**

1. Scope — Prescribes requirements, constructional details and methods of test.

2. Requirements

2.1 Basic Cloth

- a) *Outer Layer* — 298 g/m² hessian conforming to IS : 2818 (Part V)-1974 ' Specification for Indian hessian: Part V 298 g/m² at 16 percent contract regain '.
- b) *Inner Layer* — 270 g/m² hessian conforming to Type II of IS : 2818 (Part III)-1971 ' Specification for Indian hessian: Part III 213 and 270 g/m² at 14 percent contract regain '.

2.2 Bitumen — Shall preferably conform to grade 90/15 of IS : 702-1961 ' Specification for industrial bitumen (revised) '.

2.3 Bonding

2.3.1 The bitumen application shall be done on the fabric leaving a margin of not less than 35 and not more than 60 mm from the open end of the bag and preferably 5 to 10 mm from the cloth selvages at the other end.

2.3.2 The bitumen content shall not exceed 100 g/m² when tested as given in **B-1**.

2.4 Types of Stitches — Two rows of lock stitches shall be separated from each other by about 5 mm with the outer row of stitching approximately 10 mm from the edge of the bag.

2.4.1 The selvedge shall form the mouth of the bag.

2.4.2 Stitching should be done with fold over seam (to a depth of 25 mm) so that stitches go through all the four layers of laminated fabric.

2.4.3 The number of stitches shall be 12/dm.

2.4.4 *Stitching thread* — Shall be 345 tex × 2 rayon or 650 tex × 2 flax.

2.5 Double hessian laminated bags shall generally be free from bitumen oozing out on the outer side.

2.6 Dimensions and Breaking Strength — Shall be as given below:

Sl No.	Characteristics	Requirement	Method of Test
i)	Dimensions (Length × Width)	See Explanatory Note $\begin{matrix} +3 \\ -0 \end{matrix}$ cm both in length and width	B-2
ii)	Tolerance on Dimensions		
iii)	Breaking strength, kgf*, <i>Min</i> (strip method: 10 × 20 cm):	190 130	IS : 1969-1968 ' Method for determination of breaking load and elongation at break of woven textile fabrics (first revision) '.
	warpway Weftway		
iv)	Seam strength, kgf*, <i>Min</i> (5 × 20 cm double 'T' strip):	40 33	B-6 of IS : 3790-1971 ' Specification for hessian bags (first revision) '.
	Warpway Weftway		

*1 kgf = 9.8 N approx.

Adopted 12 July 1976

© April 1982, ISI

Price Rs 6.00

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3. Packing and Marking

3.1 The bags shall be delivered in the trusses.

3.2 Unless otherwise specified, the following information shall be marked on the trusses:

- a) Name of the manufacturer,
- b) Description of goods,
- c) Number of bags per truss,
- d) Lot number of the truss, and
- e) Any other particulars required by the buyer or by the law or regulation in force.

3.2.1 ISI Certification Marking — Details available with the Indian Standards Institution.

4. Sampling and Inspection — Unless otherwise specified, the procedure for sampling shall be as given in Appendix A and the procedure for testing/inspection as given in Appendix B.

5. Criteria for Conformity — The lot shall be considered as conforming to the requirements of the standard if the following conditions are satisfied:

- a) The average of the bags tested for bitumen bonding satisfies the corresponding requirements specified in 2.2 and 2.3.
- b) The dimensions of at least 90 percent of the bags under test are in accordance with the requirements specified in 2.6. In the remaining bags, no bag shall have dimensions less than 1.5 cm below the specified values.
- c) The average breaking load for the laminated fabric and seam conform to the requirements specified in 2.6.

APPENDIX A

(Clause 4)

SAMPLING

A-1. Sampling Procedure

A-1.1 The following minimum number of trusses shall be taken at random from the lot and subjected to corresponding tests (see Appendix B).

Note — All the trusses containing one definite number of bags of the same dimensions and quality, delivered to one buyer against one despatch note, shall constitute a lot.

A-1.2 The number of trusses to be sampled from each lot separately for testing various characteristics shall be as follows:

<i>Lot Size</i>	<i>Sample Size for Inspection</i>
Up to 10	1
11 " 20	2
21 " 50	3
51 " 100	4
101 " 150	5
151 " 200	6
201 " 250	7
251 " 300	8
301 " 350	9
351 " 400	10
401 and above	10 + 1 for every 100 trusses or part thereof above 400 trusses

A-1.3 From the trusses selected as in A-1.2, the test samples shall be drawn as follows:

<i>Sl No.</i>	<i>Test</i>	<i>Test Sample (Number of Bags from each Truss Selected as in A-1.2)</i>
i)	Length, width, weaving, ends, picks and sewing	10 percent of bags
ii)	Bitumen bonding	2 bags
iii)	Breaking load:	
	Fabric }	2 bags from each truss subject to minimum of 5 bags in a lot
	Seam }	

APPENDIX B

(Clauses 4 and A-1.1)

INSPECTION AND TESTING

B-0. Testing and Inspection Procedure — Testing and inspection of the lot as laid down below shall be carried out on the samples drawn in accordance with sampling procedure (see Appendix A).

B-1. Bitumen Bonding

B-1.1 From a sample bag cut two pieces of 20 × 20 cm. Out of the two pieces one piece shall be cut from the area near about the mouth of the bag and the other piece from the area close to bottom seam in such a way that both the pieces shall contain normal bitumen application portion.

B-1.2 Condition the two pieces in the standard atmosphere to moisture equilibrium and determine their mass in grams.

B-1.3 Take the fabric pieces and place them in the thimble of the Soxhlet apparatus. Take about 400 ml of light petroleum or any other suitable solvent in the extraction flask. Extract the pieces for 1.5 to 2 hours. Take out the fabric pieces and let the solvent evaporate.

B-1.3.1 Condition the fabric pieces in the standard atmosphere to moisture equilibrium and determine their mass in grams.

B-1.4 Evaluation — Find the quantity of bitumen per square metre applied by the following formula:

$$X = 12.5 \times (a - b) \text{ g/m}^2$$

where

X = mass of bitumen per square metre,

a = combined mass of the conditioned cut pieces (see **B-1.2**), and

b = combined conditioned mass of the extracted fabric pieces (see **B-1.3.1**) + 5 percent for oil content correction (see Note below).

Note — 5 percent of oil content on conditioned mass basis corresponds to 6 percent of oil content on dry de-oiled material pieces.

B-2. Length and Width — Lay each bag flat, free from creases and wrinkles, on a table and measure the outside length and width about the centre to the nearest 0.5 cm.

B-3. Mass per Bag — Weigh each bag to the nearest 5 g in the prevailing atmospheric conditions and calculate the average mass of bag.

Note 1 — The determination of the mass per bag is for the information of the buyer.

Note 2 — In case of dispute on the mass of the basic fabric for the bags, the buyer may ascertain that the manufacturer has used the basic fabric conforming to the fabric specified in 2.1.

EXPLANATORY NOTE

The use of these bags is in compliance with the conditions laid down in IS : 8190 (Part I)-1976 'Requirements of packaging of pesticides : Part I Solid pesticides '.

The following table gives the recommended sizes of double hessian jute bags for packing 5, 10, 25 and 50 kg of pesticide depending upon its bulk density:

Bulk Density of Pesticides g/ml		Outside Minimum Dimensions of Bags of Different Holding Capacities (approx)			
Above	Up to and including	5 kg cm	10 kg cm	25 kg cm	50 kg cm
—	0.50	51 × 31	63 × 39	86 × 57	109 × 67
0.50	0.60	49 × 29	60 × 36	81 × 54	104 × 64
0.60	0.70	47 × 28	57 × 35	77 × 51	99 × 61
0.70	0.80	45 × 27	54 × 33	73 × 49	94 × 58
0.80	—	43 × 26	52 × 32	71 × 47	91 × 56

The above dimensions ensure an optimum free space about 8 to 10 cm which is required to withstand the impact of incidental dropping during transit.

AMENDMENT NO. 2 OCTOBER 1979

TO

IS:8115-1976 SPECIFICATION FOR DOUBLE HESSIAN
JUTE BAGS FOR PESTICIDES

Corrigendum

[Page 2, clause 5(b), line 3] - Substitute
'1.5 cm' for '15 cm'.

(TDC 3)

Reprography Unit, ISI, New Delhi

AMENDMENT NO. 3 NOVEMBER 2005
TO
IS 8115 : 1976 SPECIFICATION FOR DOUBLE HESSIAN
JUTE BAGS FOR PESTICIDES

(*Page 1, clause 2.4.4*) — Insert the following note at the end:

‘NOTE — The count of stitching thread is given for guidance only’

(TX 03)